

# KIC 006791033

## Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	$R_{\star}$ ( $R_{\odot}$ )	$T_{\star}$ (K)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006791033-01	OBS	No	0.758122	132.036552	8.7	6.297	7.8	1.6	6.99	5016	2.03	0.00

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006791033-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_UNRESOLVED_OFFSET

**Notes:** OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

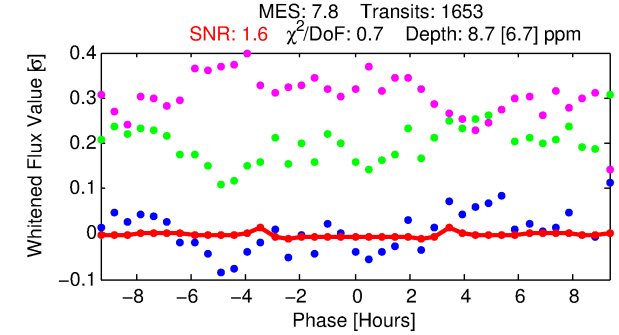
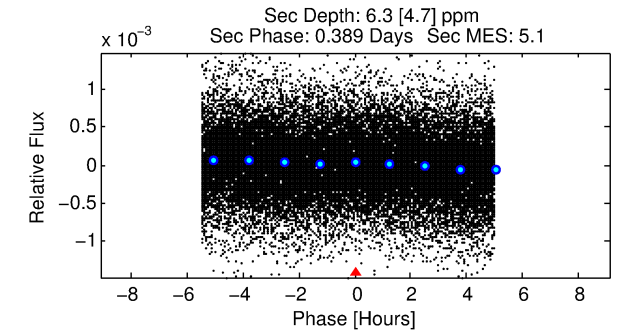
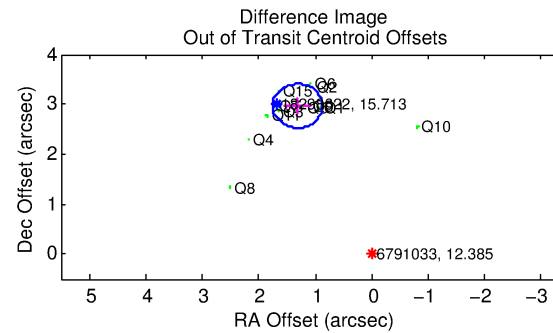
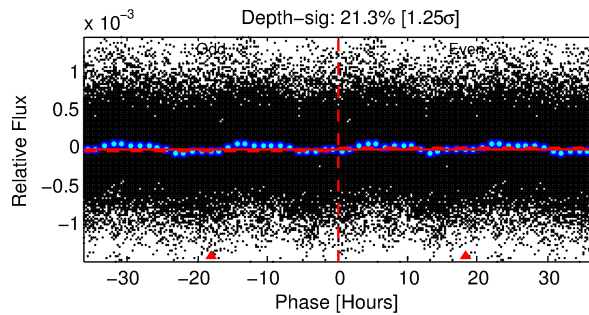
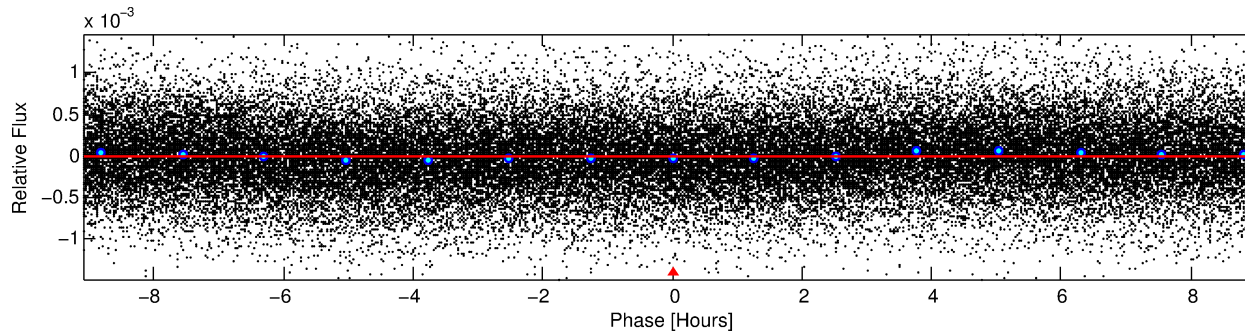
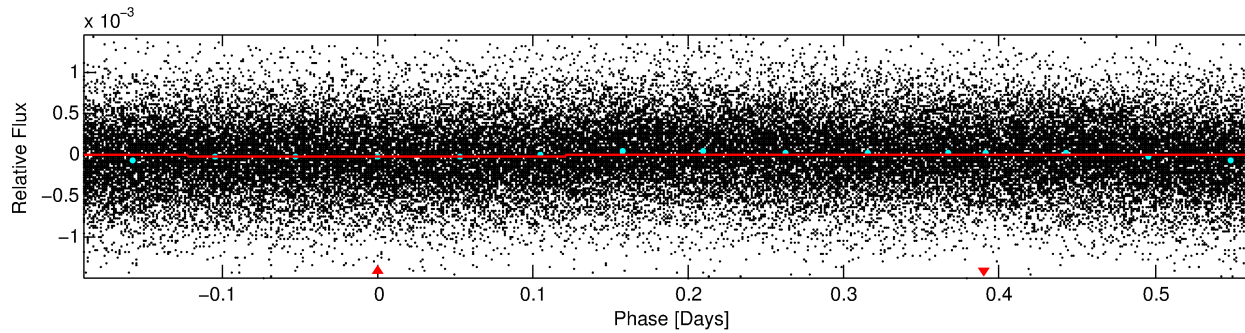
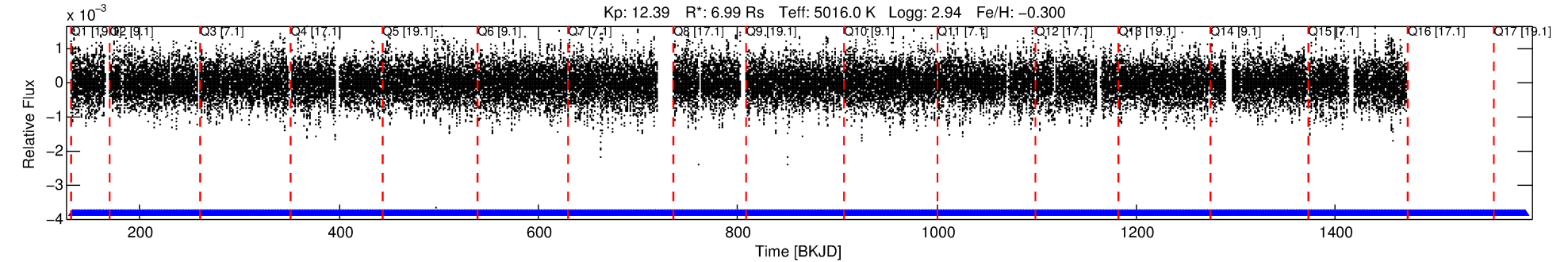
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006791033-01

No Significant Match Found

# DV One-Page Summary

KIC: 6791033 Candidate: 1 of 1 Period: 0.758 d



## DV Fit Results:

Period = 0.75812 [0.00006] d  
Epoch = 132.0366 [0.0089] BKJD  
Rp/R\* = 0.0027 [0.0037]  
a/R\* = 1.12 [1.23]  
b = 0.30 [16.56]  
Seff = N/A  
Teq = N/A  
Rp = 2.03 [2.90] Re  
a = N/A  
Ag = N/A  
Teffp = N/A

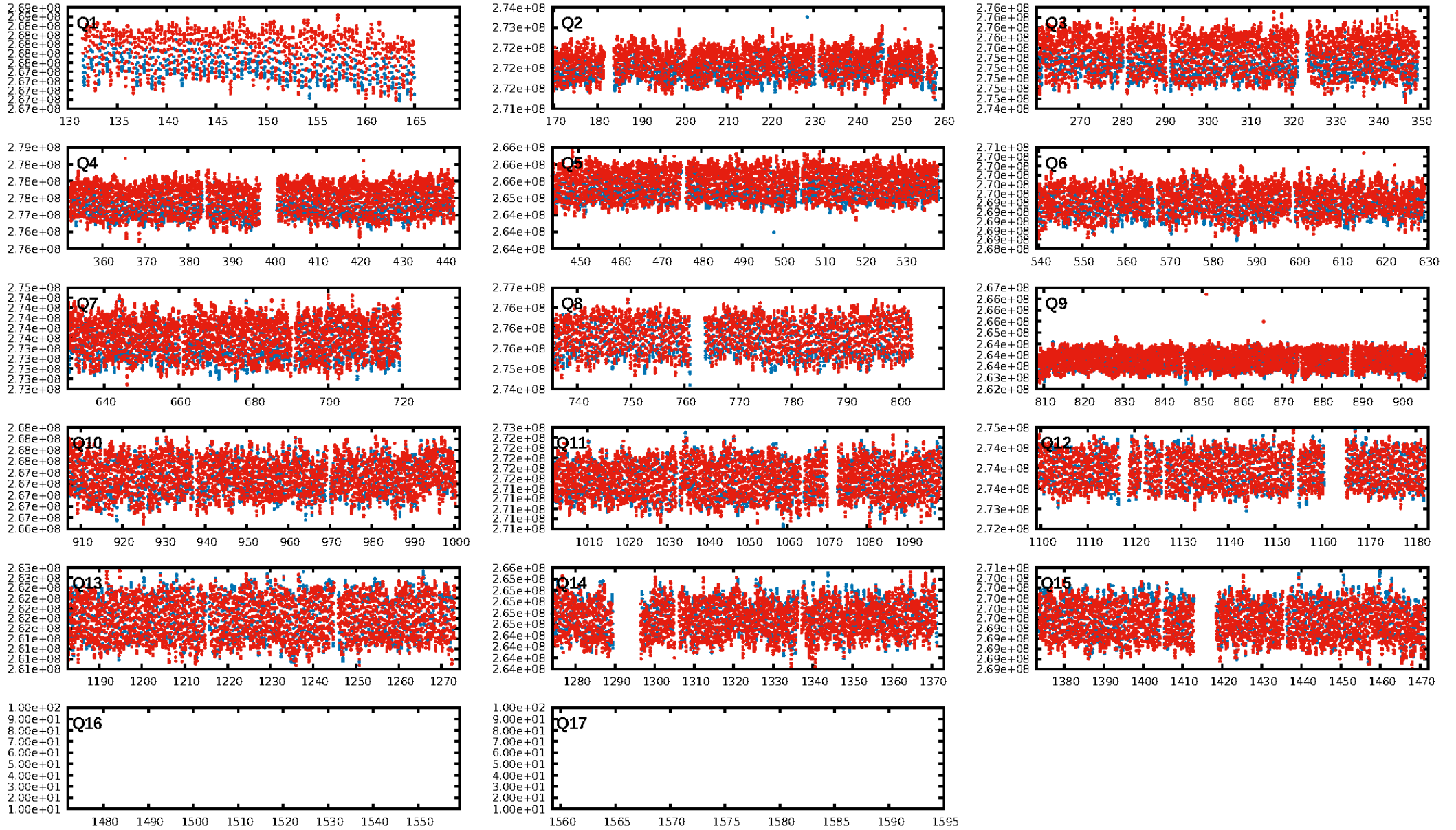
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [1609/1609]  
GhostDiagnostic-chr: 1.066  
Centroid-sig: 0.0%  
Centroid-so: 13.265 arcsec [6.92 $\sigma$ ]  
OotOffset-rm: 3.244 arcsec [22.12 $\sigma$ ]  
KicOffset-rm: 3.275 arcsec [21.50 $\sigma$ ]  
OotOffset-st: 3/4/2/3 [12]  
KicOffset-st: 3/4/2/3 [12]  
DiffImageQuality-fgm: 0.92 [11/12]  
DiffImageOverlap-fno: 1.00 [15/15]

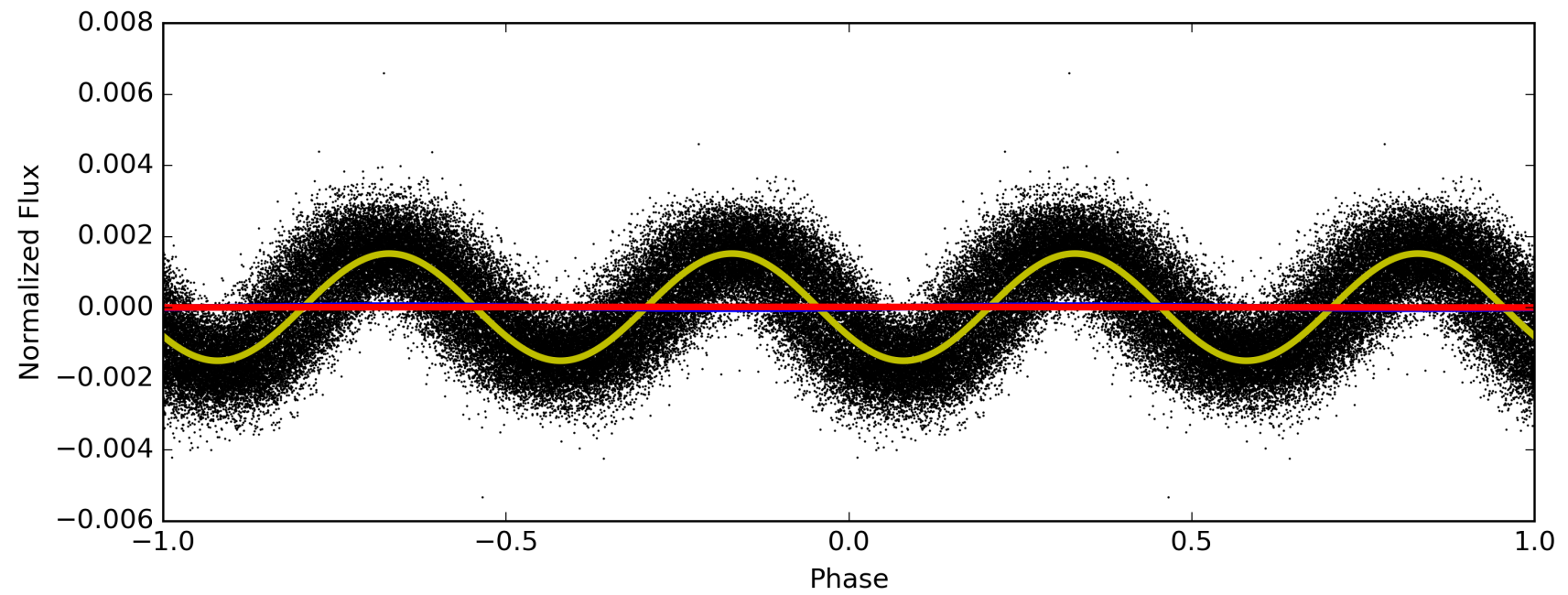
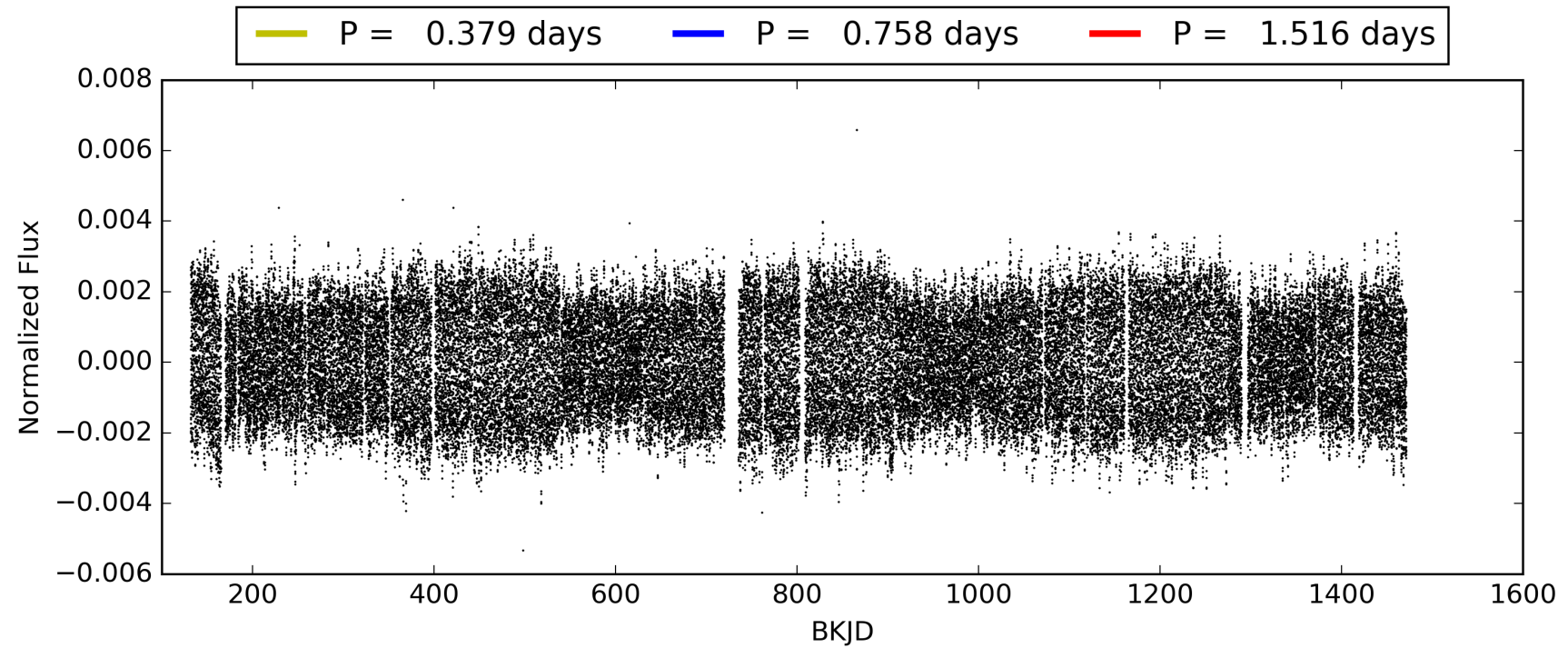
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:45:27 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 006791033-01, PDC Light Curves

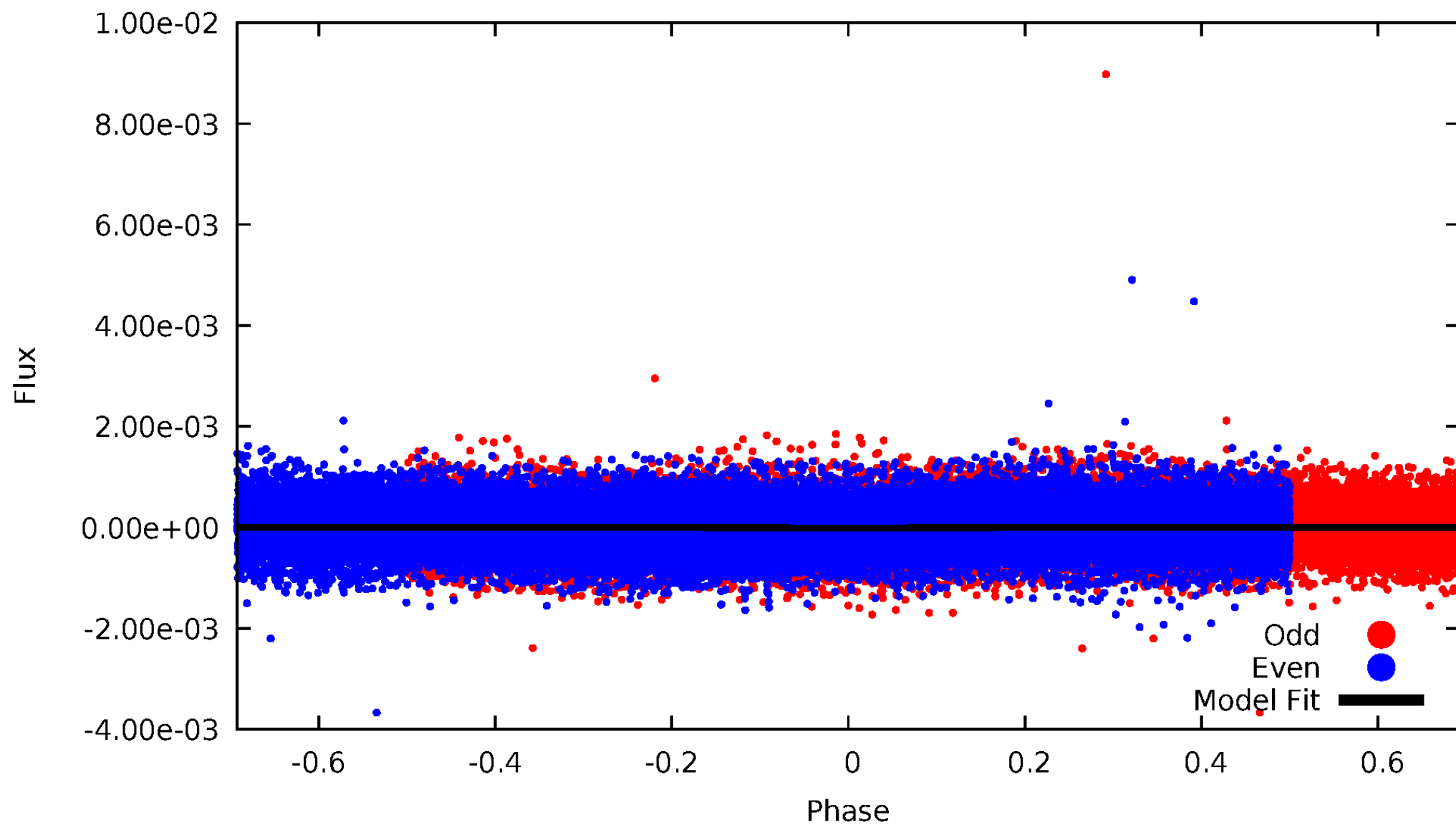


TCE 006791033-01



# DV Odd/Even

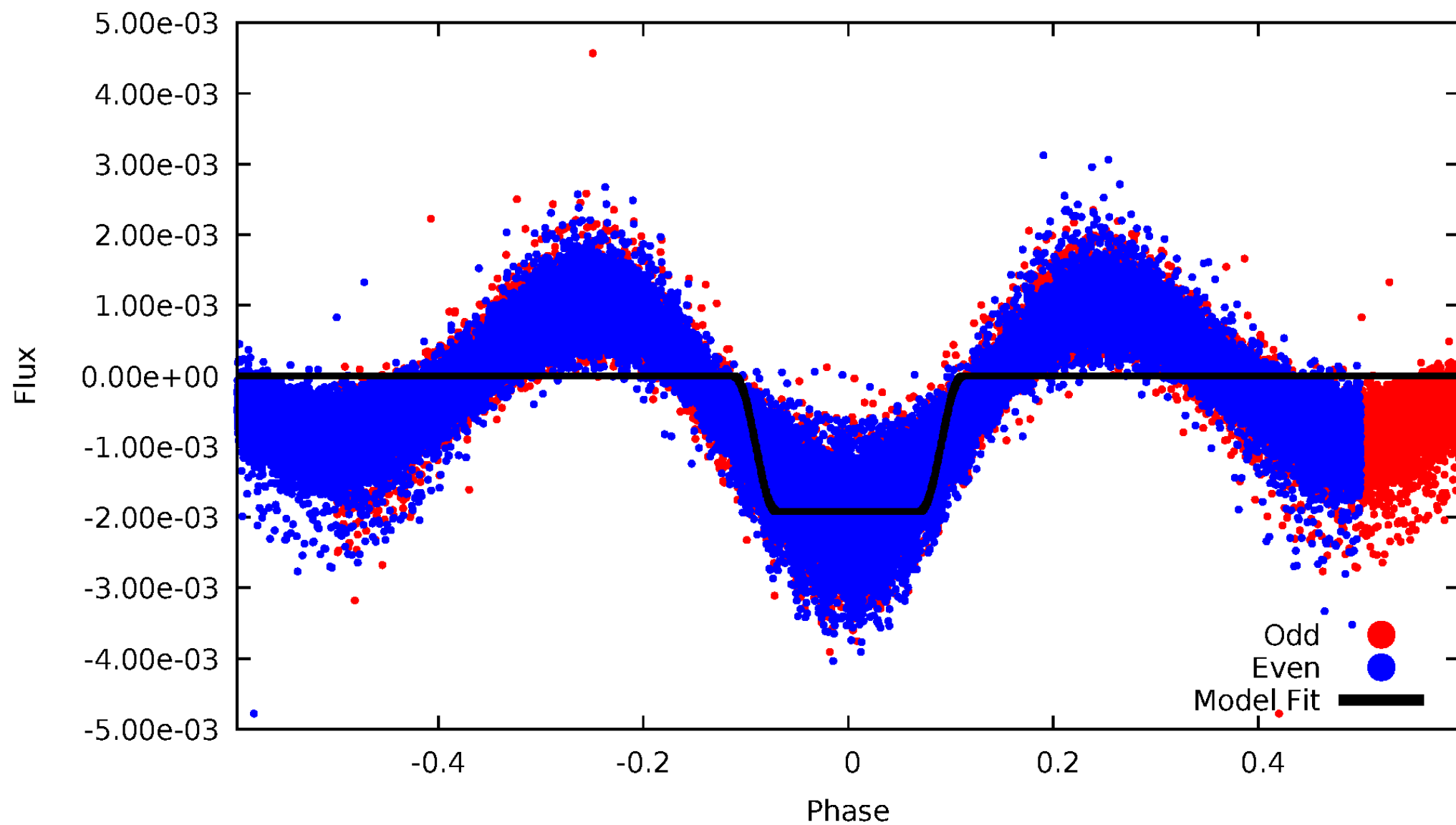
TCE 006791033-01



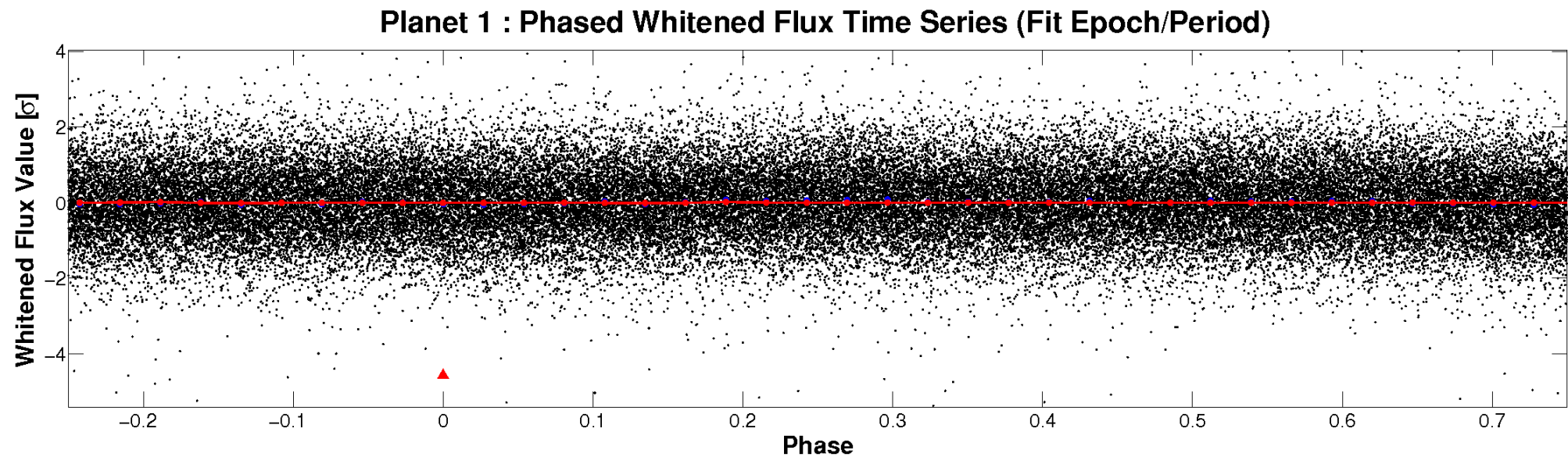
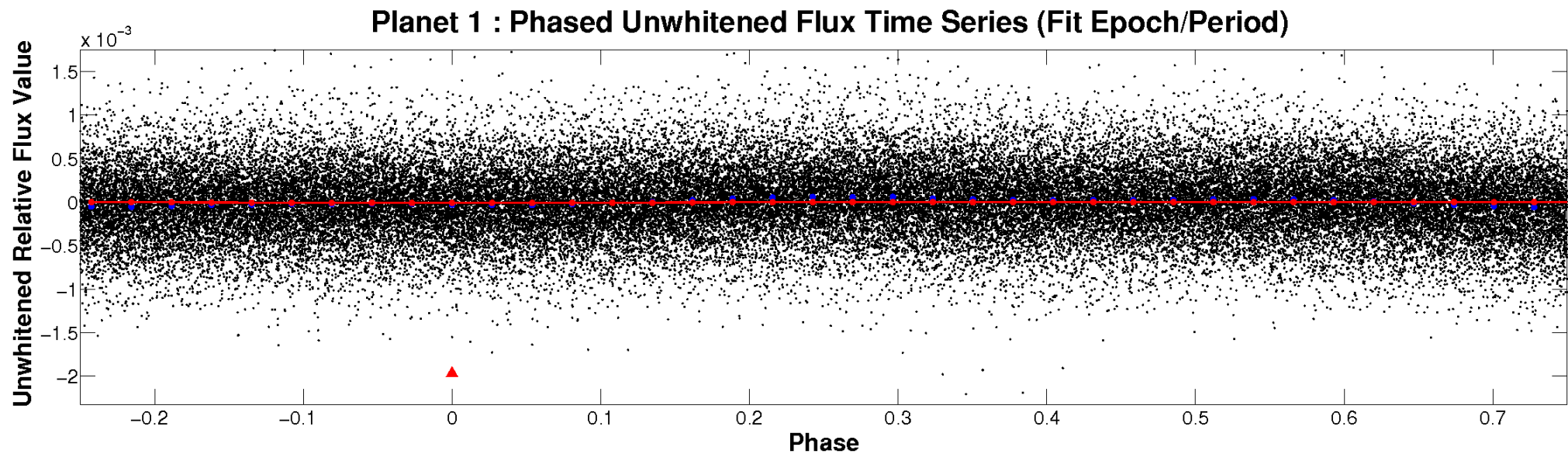


# ALT Odd/Even

TCE 006791033-01

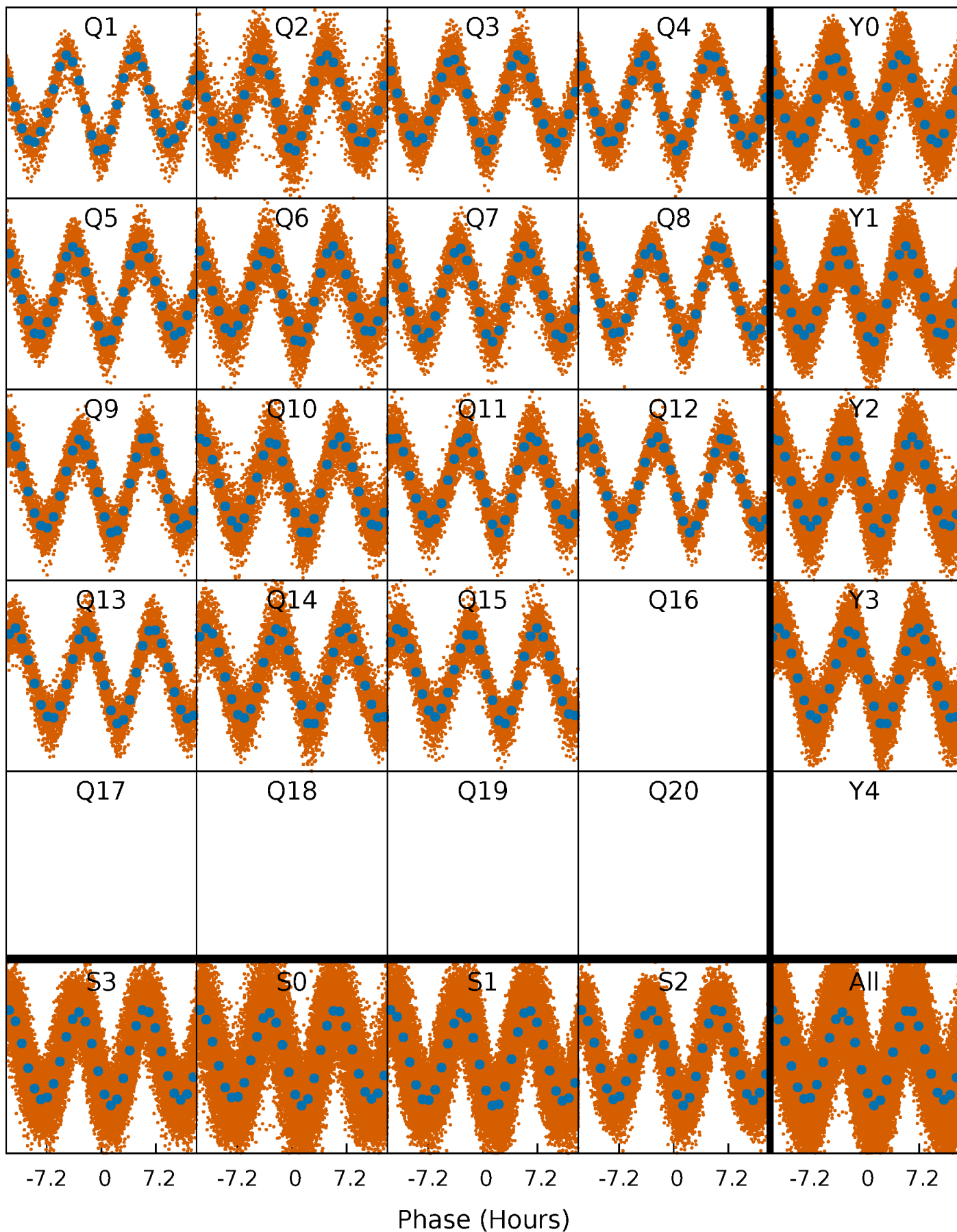


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

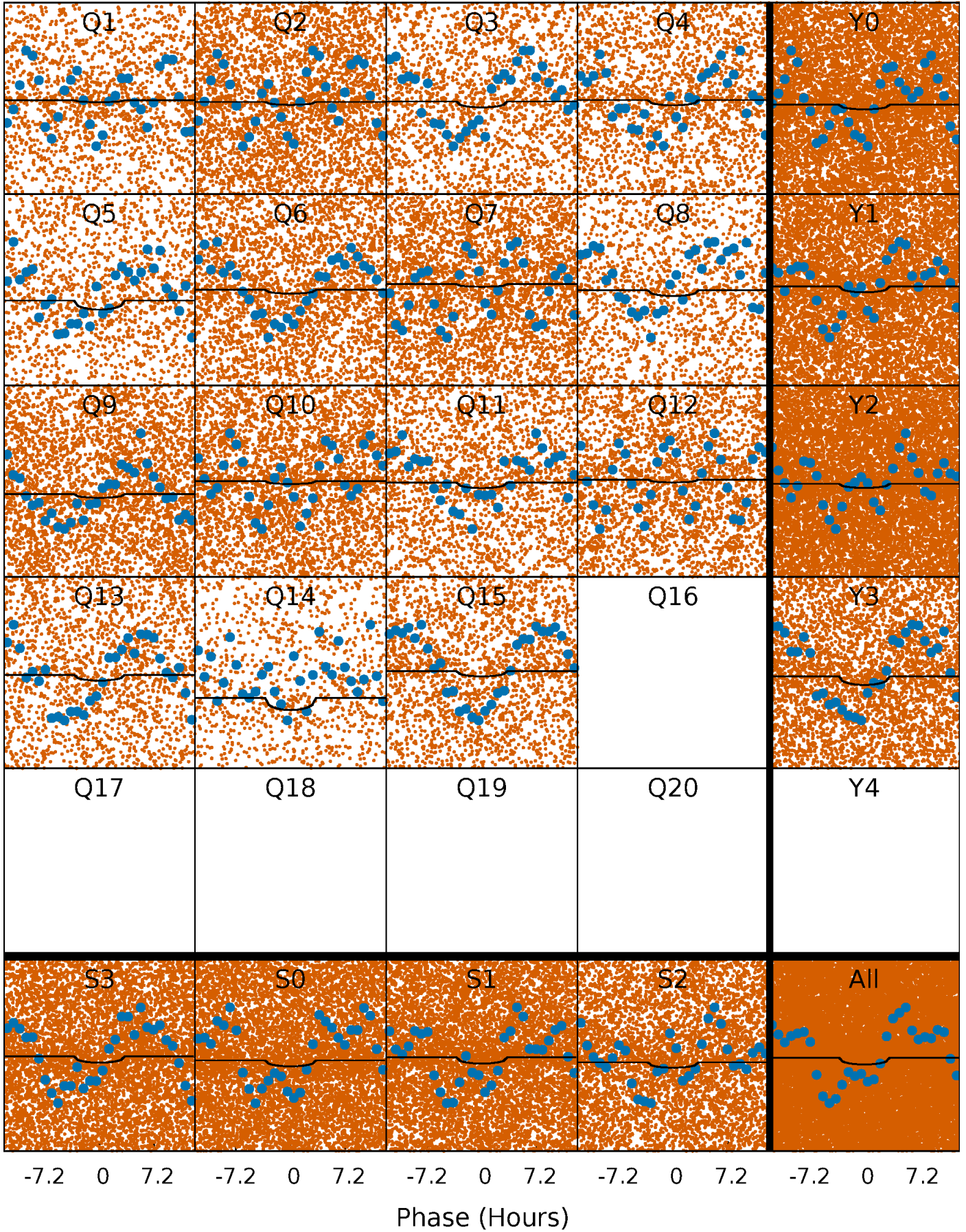
TCE 006791033-01   P= 0.758122 Days    $T_0=132.036552$  (BKJD)





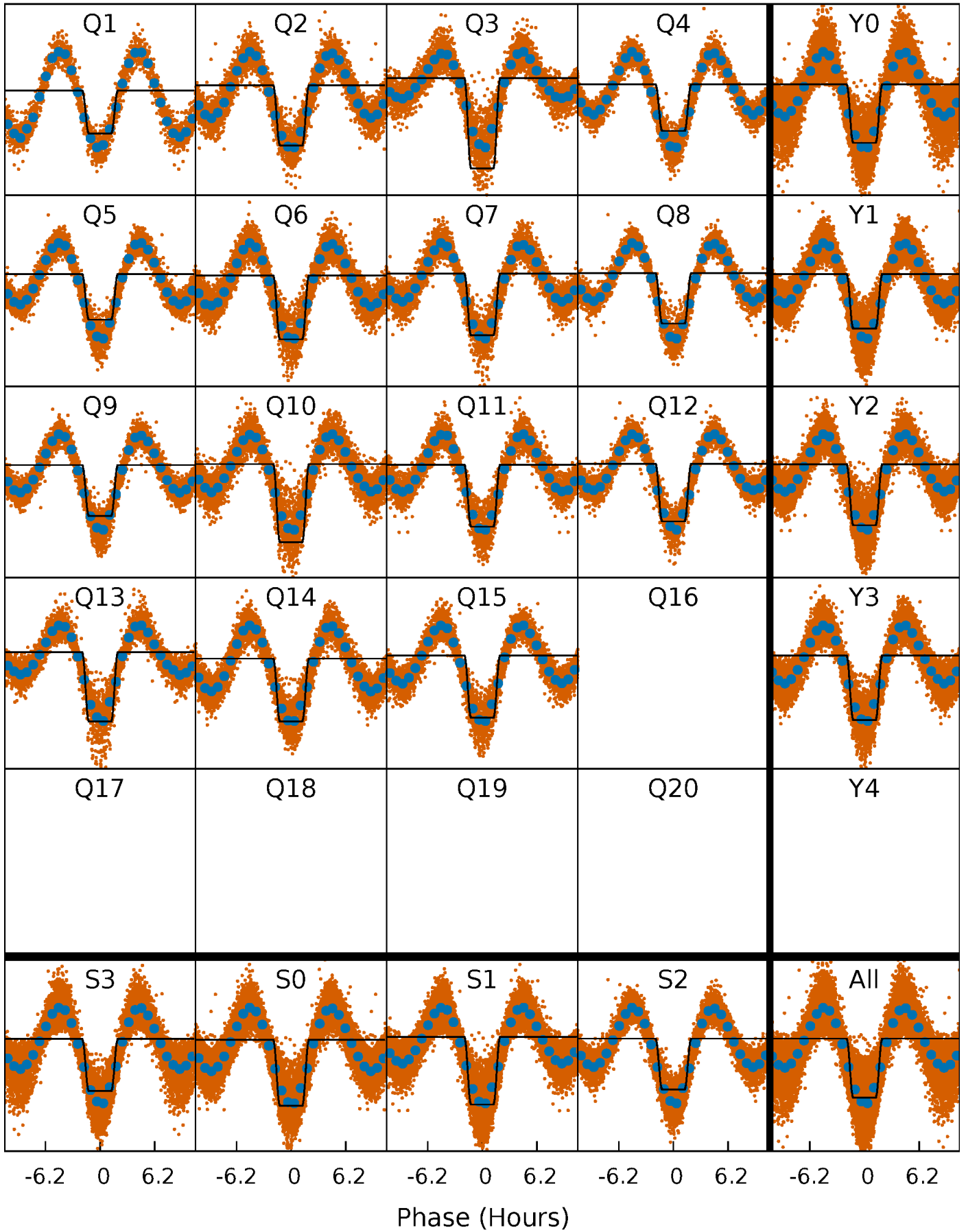
# DV Quarter-Phased Transit Curves

TCE 006791033-01 P= 0.758122 Days  $T_0=132.036552$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

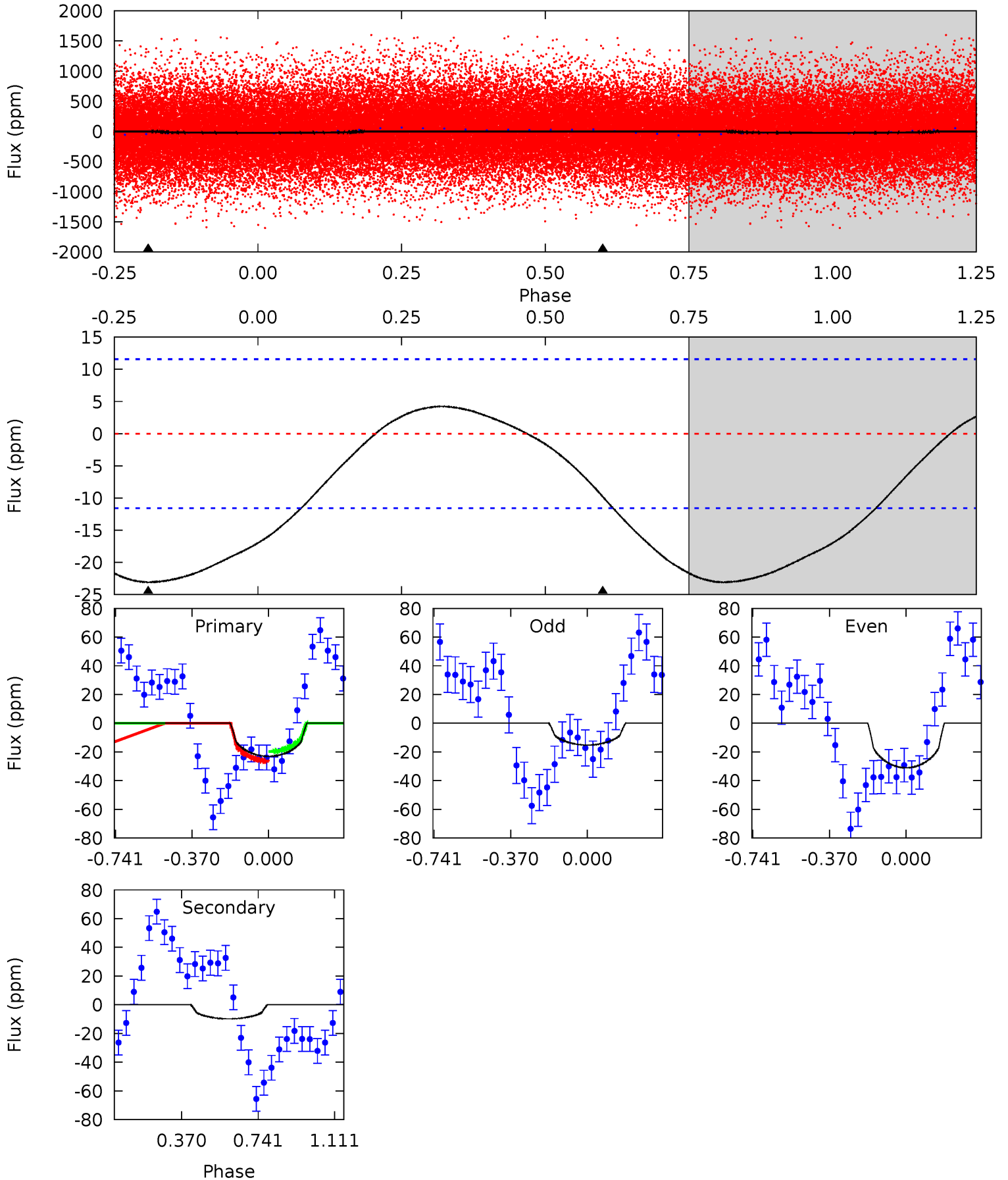
TCE 006791033-01   P= 0.758190 Days    $T_0=132.038544$  (BKJD)



# DV Model-Shift Uniqueness Test

006791033-01, P = 0.758122 Days, E = 131.278430 Days

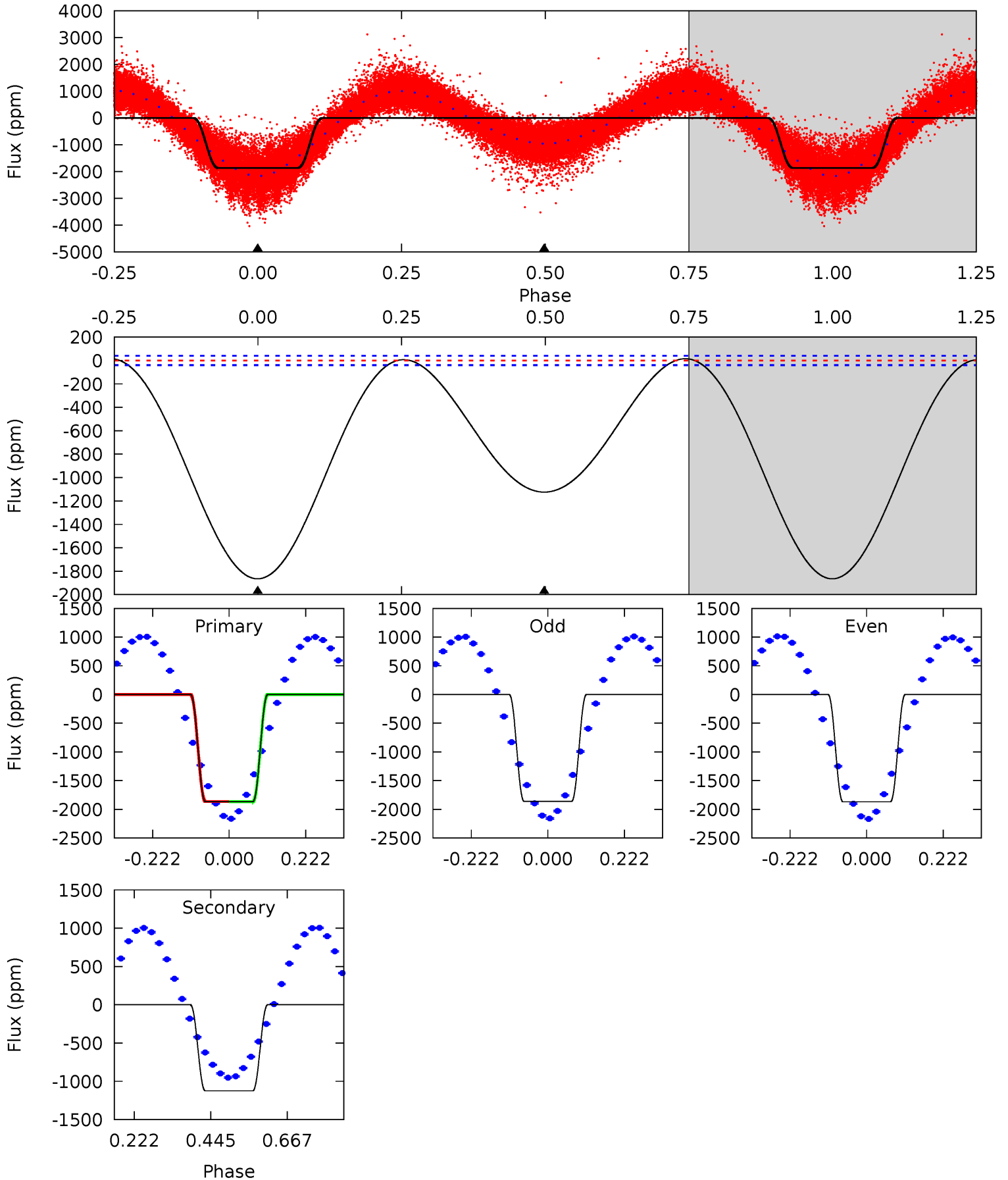
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.55	3.63	0	0	4.28	0.90	0.79	8.55	8.55	3.63	3.63	2.93	1.00	0.16	1.25



# Alt Model-Shift Uniqueness Test

006791033-01, P = 0.758190 Days, E = 131.280354 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
204.2	123.1	0	0	4.39	1.22	1.83	204.2	204.2	123.1	123.1	0.49	1.00	0.01	0.25



### Stellar Parameters For KIC 006791033

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5016^{+99}_{-136}$	$2.945^{+0.240}_{-0.160}$	$-0.300^{+0.200}_{-0.250}$	$6.988^{+1.489}_{-2.419}$	$1.570^{+0.234}_{-0.545}$	$0.006^{+0.010}_{-0.003}$
	+2%/-3%	+8%/-5%	+67%/-83%	+21%/-35%	+15%/-35%	+158%/-40%
Source	PHO1	FLK73	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 006791033-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-10 \pm 3$	$2.63^{+2.67}_{-1.70}$	$5898^{+418}_{-501}$	$-3182^{+10466}_{-1502}$	$0.271^{+1.736}_{-0.203}$
Alt.	$-1124 \pm 9$	$33.07^{+5.71}_{-6.25}$	$5911^{+389}_{-446}$	$-3922^{+1130}_{-491}$	$0.204^{+0.083}_{-0.052}$

$T_{max}$  = Theoretical Maximum Planetary Temperature

$T_{obs}$  = Observed Planetary Temperature (Assuming  $A=0.3$ )

$A_{obs}$  = Observed Albedo (Assuming  $T=0$ )

If a secondary eclipse is present, the system is likely an EB if  $T_{obs} \gg T_{max}$  AND  $A_{obs} \gg 1.0$



## DV Centroid Data

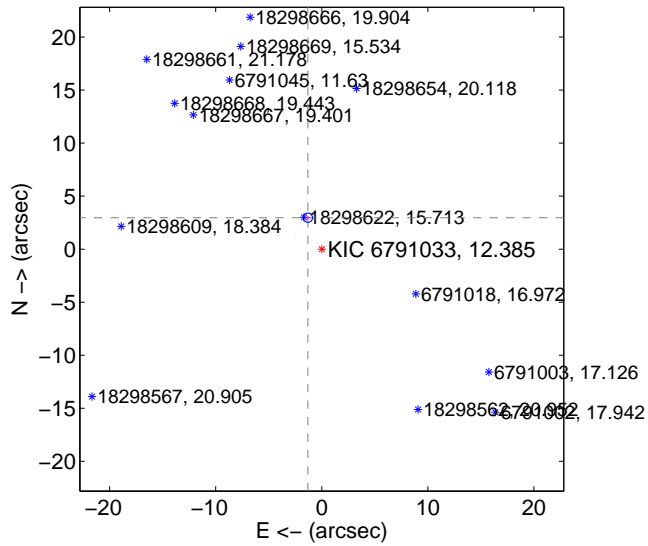
Supplemental centroid analysis for 006791033-01. Kepler magnitude: 12.38. Transit SNR 1.58

There are 11 quarters with good PRF difference image offsets

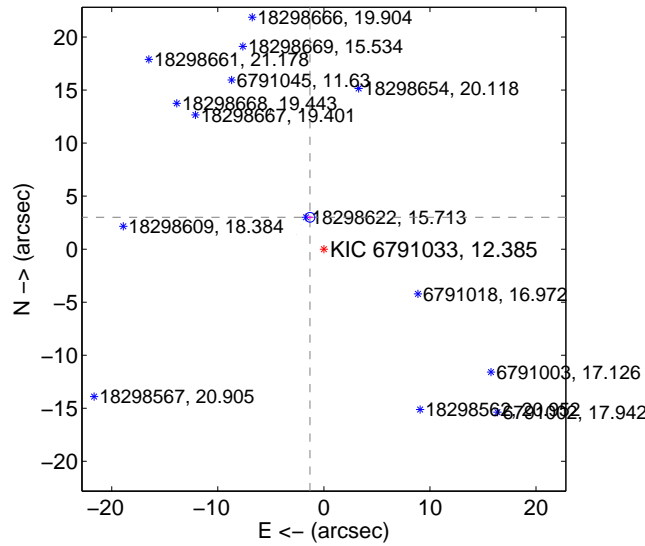
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$3.244 \pm 0.147$	<b>22.12</b>	$1.313 \pm 0.221$	$2.966 \pm 0.155$
PRF-fit source offset from KIC position	$3.275 \pm 0.152$	<b>21.50</b>	$1.308 \pm 0.252$	$3.002 \pm 0.167$
photometric centroid source offset	$13.26 \pm 1.92$	<b>6.92</b>	$4.18 \pm 1.55$	$12.59 \pm 1.95$

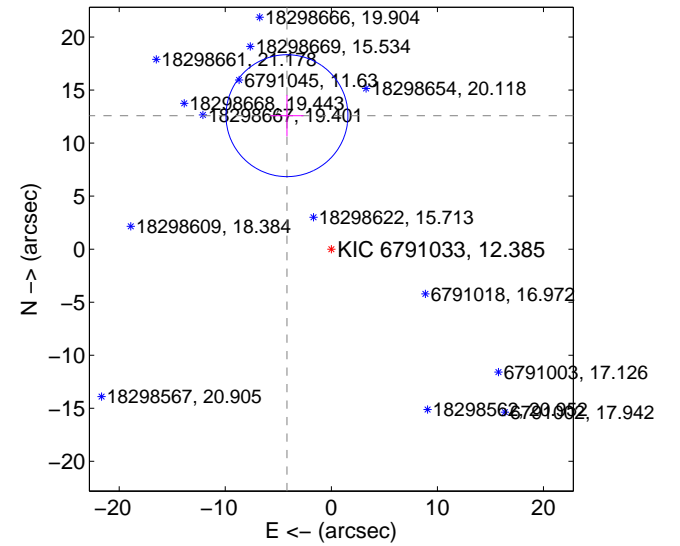
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

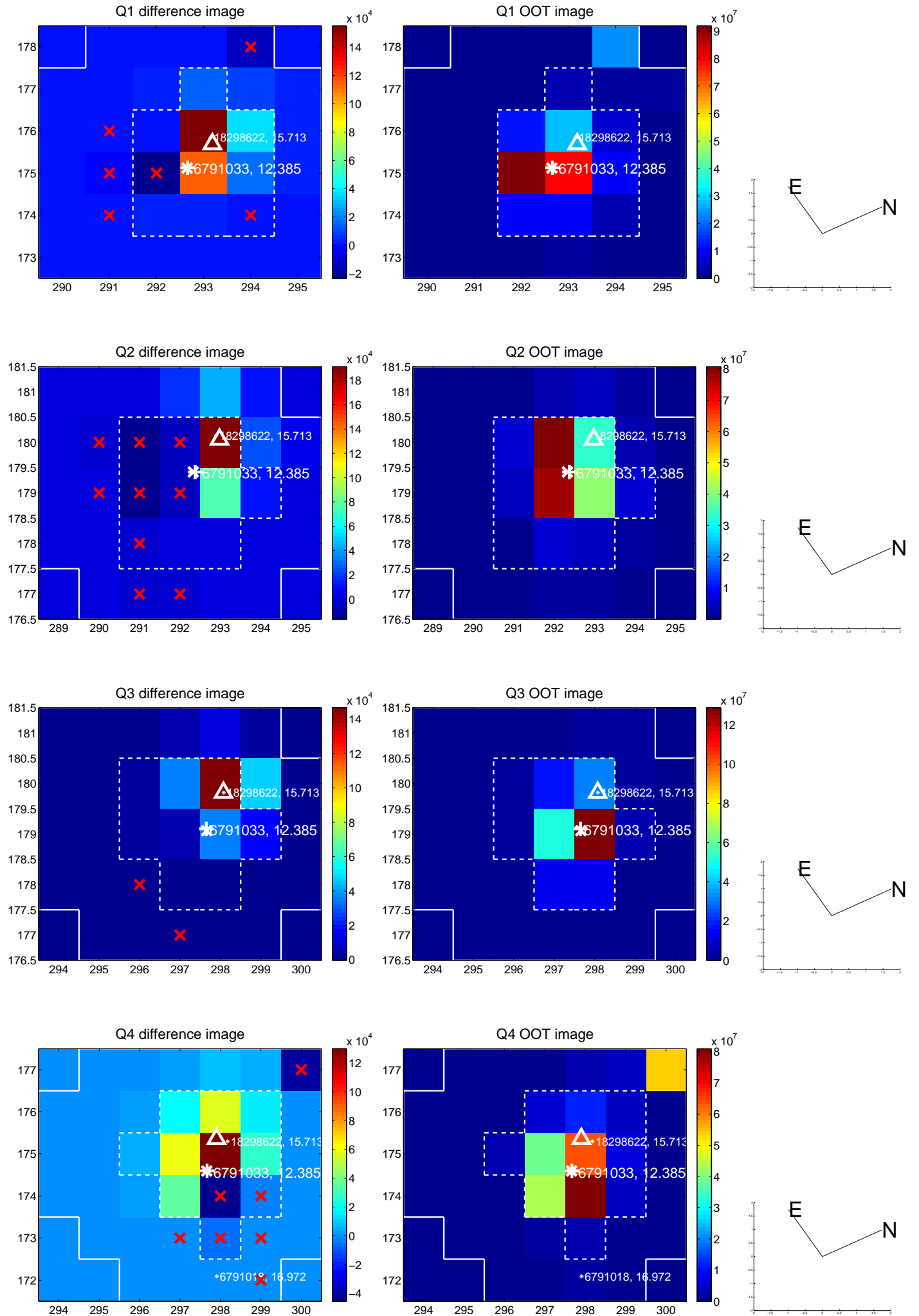


offset from photometric centroids

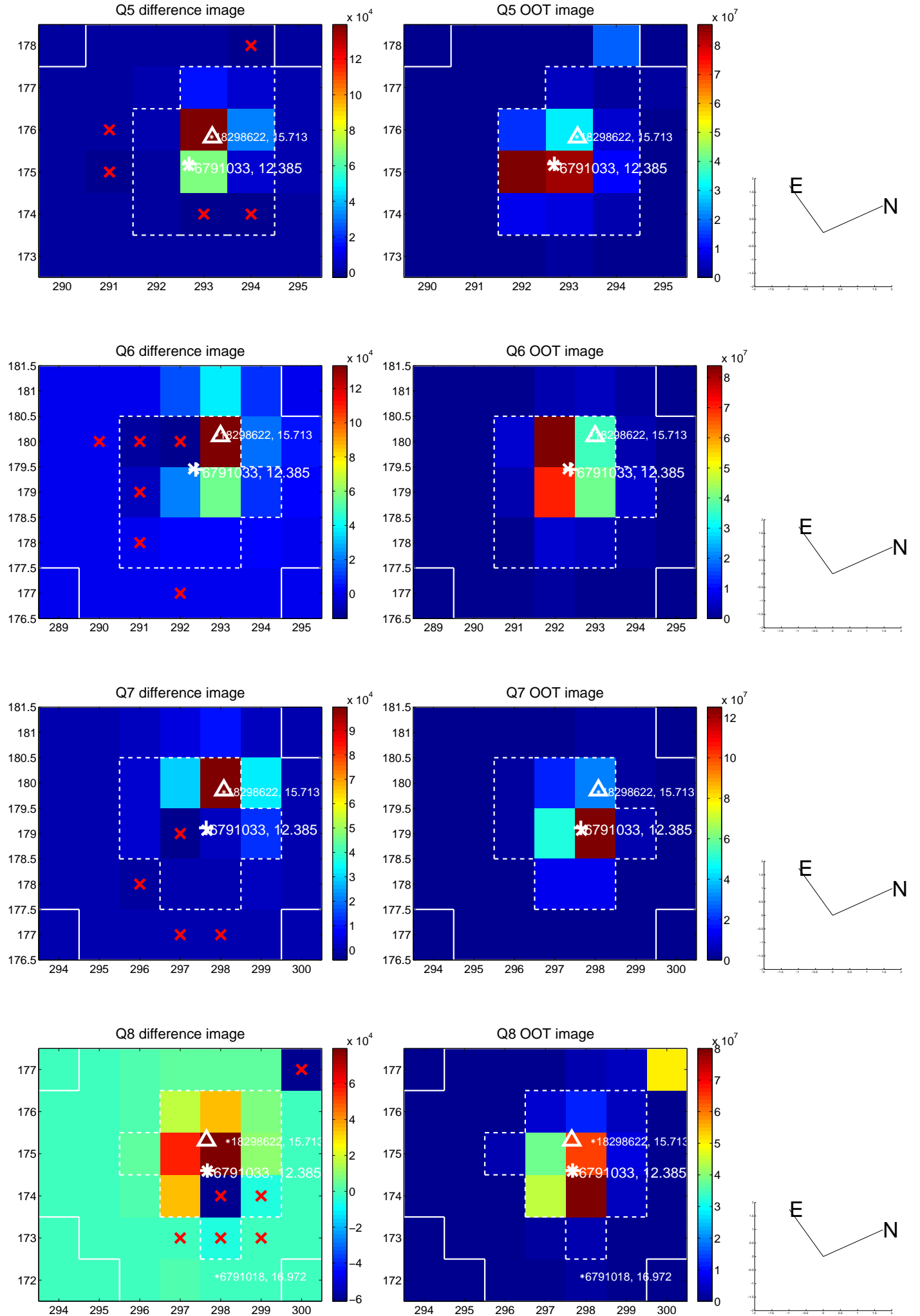


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . Red \*: target star. Blue \*: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

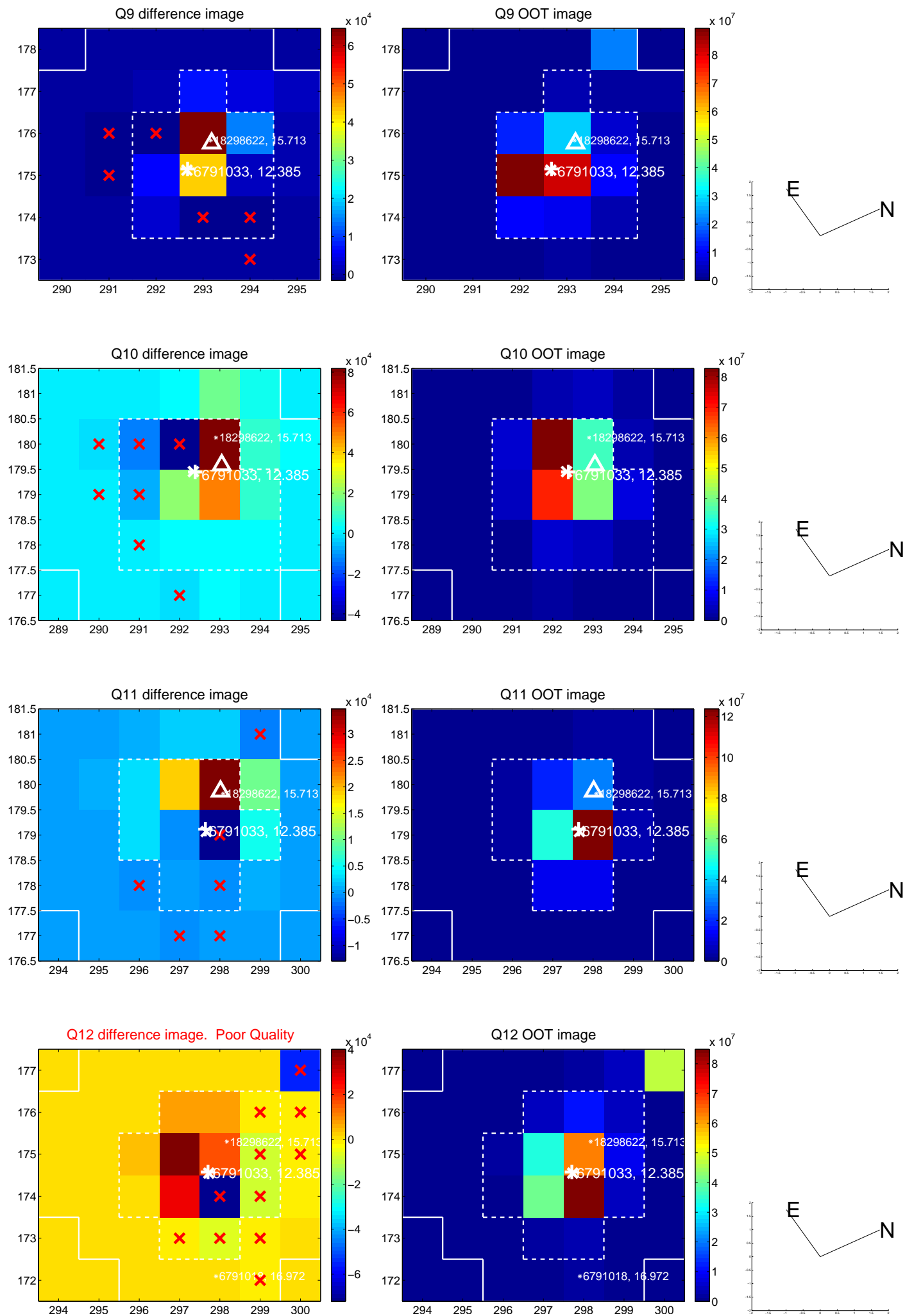
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



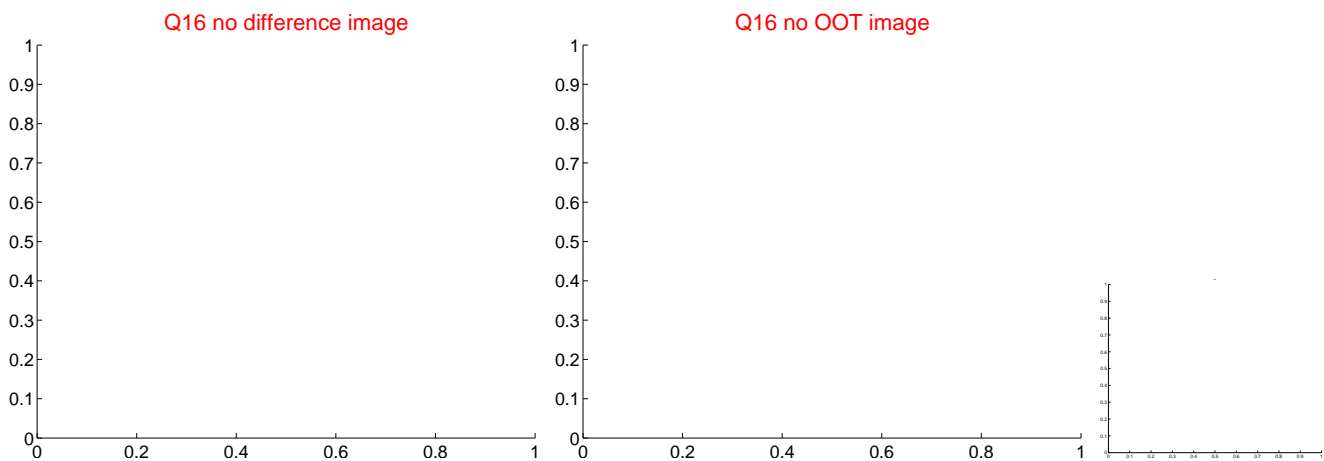
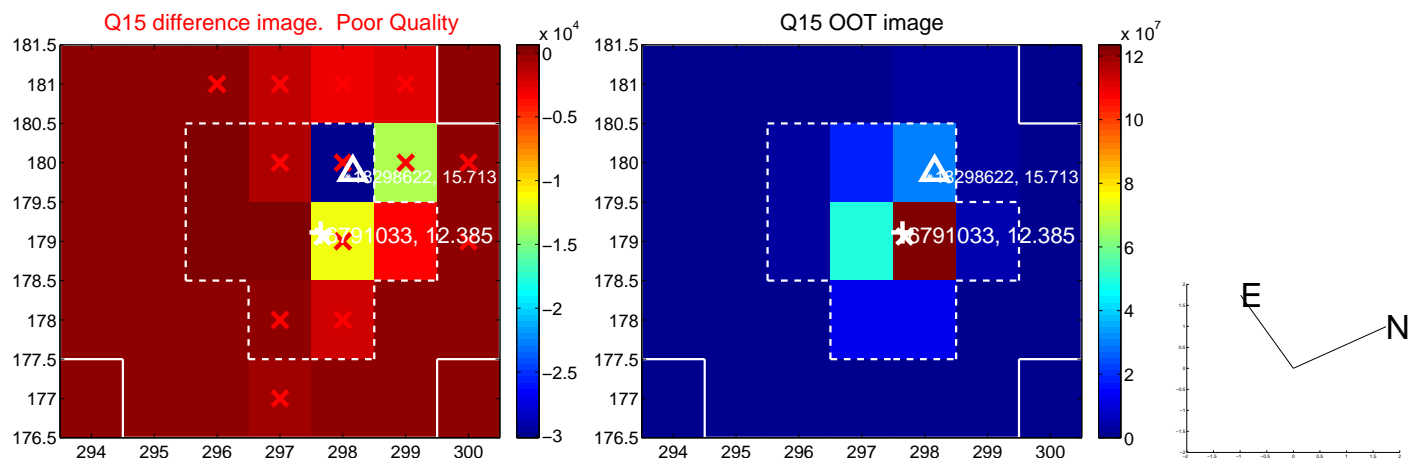
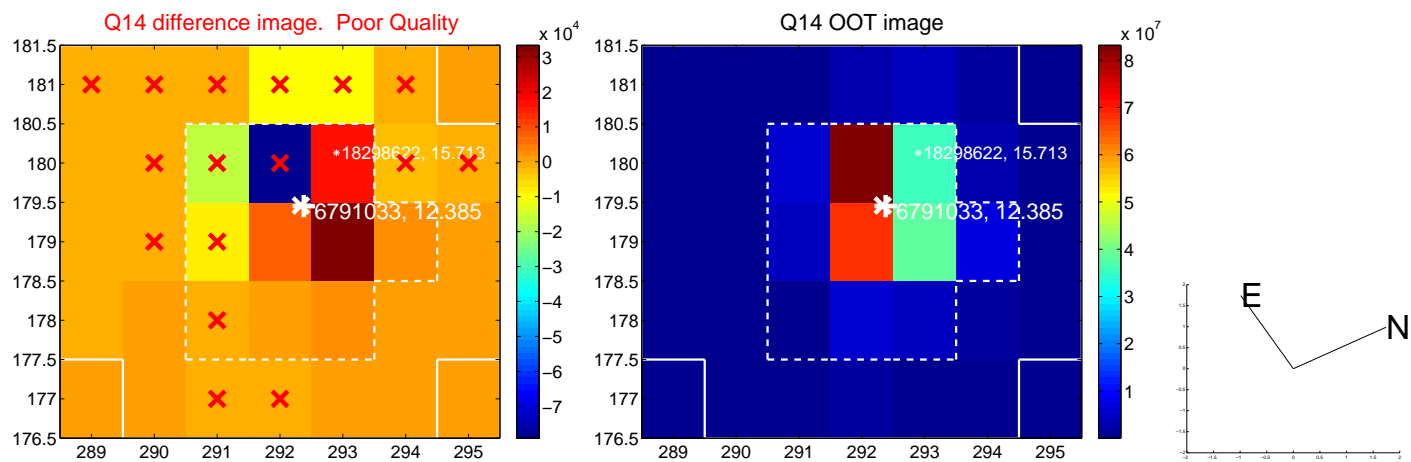
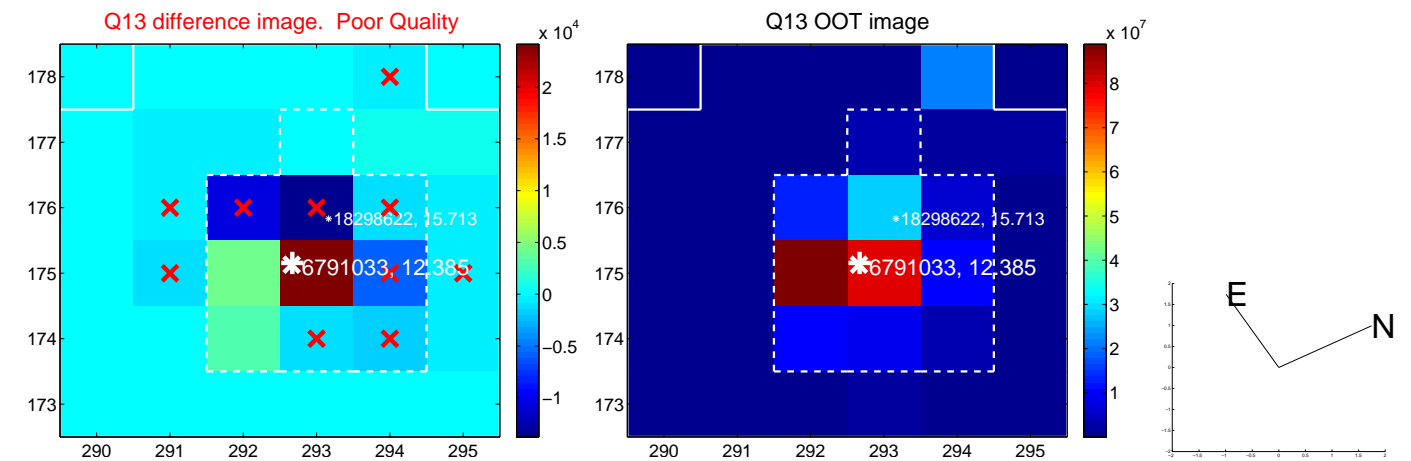
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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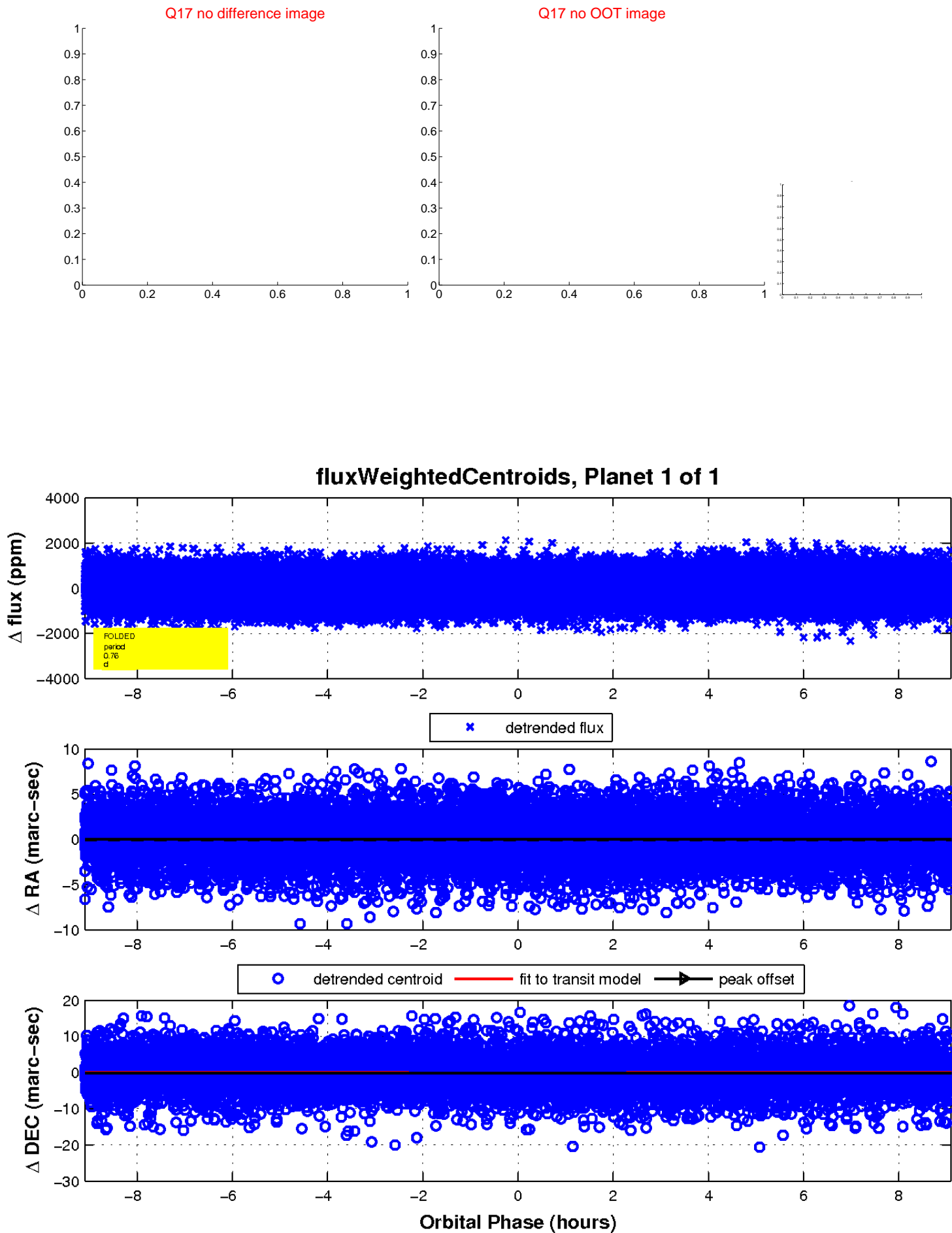


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination

